



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,454	01/24/2002	David Cooke	1627D	3228

7590 03/23/2004  
Erich E. Veitenheimer, Esq.  
Morgan Lewis & Bockius, LLP  
1111 Pennsylvania Avenue NW  
Washington, DC 20004

EXAMINER

FOX, DAVID T

ART UNIT PAPER NUMBER

1638

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/056,454

Applicant(s)

COOKE ET AL.

Examiner

David T. Fox

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27-37, 42-51, 53-63, 67, 68 and 73 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31 and 32 is/are allowed.
- 6) ☒ Claim(s) 27-30, 33-37, 42-51, 53-63, 67, 68 and 73 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Applicants' substitute Sequence Listing of 09 January 2004 is acknowledged and has been entered. Applicants' amendments of 09 January 2004 have overcome the outstanding objections to the specification and claims; and the outstanding claim rejections under 35 USC 101; 35 USC 112, second paragraph; 35 USC 112, first paragraph regarding written description and enablement (except as noted below); and 35 USC 102 (except for claim 67).

Applicants' submission of Table 1 as pages 21a-21e of the specification is acknowledged. Applicants have demonstrated that the Table was present in the parent application. Accordingly, the Table is not new matter, and has been entered into the instant specification.

Claims 42-47 and 49-51 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for claims limited to the modification of starch composition in plants transformed with potato class A starch branching enzymes, does not reasonably provide enablement for claims broadly drawn to the modification of any other plant characteristic including height or disease resistance. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims, as stated on pages 6-8 of the last Office action.

Applicant's arguments filed 09 January 2004, insofar as they pertain to the rejection above, have been fully considered but they are not persuasive.

Applicants urge that their amendments address the scope of enablement rejection, and that undue experimentation would not have been required by the skilled artisan to evaluate homologous cosuppression utilizing the narrowly claimed gene fragments. The Examiner concurs, regarding claims limited to methods of modifying starch composition in transformed plants. However, claims 42-47 and 49-51 are broadly drawn to methods for modifying *any* plant characteristic including height, yield, disease or insect resistance, flowering time, etc. It is unlikely that the class A starch branching enzyme would have any effect on these traits, and undue experimentation would have been required to develop and evaluate plants with altered non-starch traits following transformation with a starch synthesis gene. See claim 48.

Claims 27-30, 33-37, 42-51, 53-63, 68 and 73 (newly amended) are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Newly amended claim 27 (and dependents) recite a nucleotide sequence which encodes an amino acid sequence "comprising at least 400 contiguous amino acids of SEQ ID NO:15". However, the Examiner is unable to find basis in the specification for this term. Applicants' cited portions of the specification refer to 400 contiguous base pairs of a nucleic acid sequence, not amino acids (page 14, lines 23-25). The paragraph bridging pages 18 and 19 of the specification refers to a particular 1200bp

Art Unit: 1638

fragment of the potato class A SBE gene, but does not mention 400 contiguous amino acids. Accordingly, the claims are directed to NEW MATTER.

Claim 67 remains rejected under 35 U.S.C. 102(e) as being anticipated by Willmitzer et al (U.S. 6,215,042) as stated on pages 10-11 of the last Office action.

Claim 67 remains rejected under 35 U.S.C. 102(b) as being anticipated by WO 92/14827 (INSTITUT FUR GENBIOLOGISCHE), as stated on page 11 of the last Office action.

Claim 67 remains rejected under 35 U.S.C. 102(b) as being anticipated by WO 95/07355 (INSTITUT FUR GENBIOLOGISCHE), as stated on page 11 of the last Office action.

Applicant's arguments filed 09 January 2004 have been fully considered but they are not persuasive. Applicants urge that their amendments have obviated all art rejections of record. The Examiner has withdrawn all art rejections of claims which have been amended to recite particular nucleotide sequences encoding particular amino acid sequences. However, claim 67 has not been so amended.

Claims 31 and 32 are allowed.

Following her invitation on page 19 of the response of 09 January 2004, Applicants' representative is invited to contact the Examiner if she has any questions regarding this Office action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1638

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (571) 272-0795. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached on (571) 272-0804. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

March 19, 2004

DAVID T. FOX  
PRIMARY EXAMINER  
GROUP 180-1638

